**OBJECTIVES:** To explore medical expenditure and its impact for people with diabetes covered by Urban Employee Basic Medical Insurance for Hebei Provincial Institutes (UEBMIHPI). **METHODS:** People diagnosed with "diabetes" were identified from UEBMIHPI claims database during Dec 30th, 2010 and Dec 25th, 2011. The Sum_All Medical method was used for expenditure estimation. Descriptive analyses were conducted using EXCEL 2010. **RESULTS:** During Dec 30th, 2010 and Dec 25th, 2011, the UEBMIHPI database recorded claims data of 110256 patients, including 7944 with diabetes (7.21% of all patients), among which 7421 had outpatient records (7.24% of all outpatients) and 2964 had inpatient records (12.16% of all inpatients). 63.28% were male and 79.51% were 50 years of age or older. Mean number of outpatient visits was 14.04 for people with diabetes, in comparison with 4.12 for outpatient with other diseases. Outpatient treatment cost was CNY 9332.52/person and CNY 724.99/visit, of which 30.59% were out-of-pocket money. For those who had used inpatient services, annual inpatient admissions were 1.67 times/person and the cost was CNY 23494.63/person and CNY 14109.20/hospital stay. Over 60% hospitalizations happened in tertiary hospitals. People with diabetes consumed 21.59% (CNY 139million) of total medical expenditure. Only CNY 21 million (15.42%) was spent on anti-glycaemic treatments, the cost of OAD, insulin, insulin pump and Chinese traditional drugs accounted for 52.27%, 40.75%, 2.62% and 4.36% respectively. People with diabetes who received diagnoses or treatments for diabetic complications consumed more health care resources (physician visit, medical expenditure/person and medical expenditure/visit) than others. **CONCLUSIONS:** As one of the major chronic diseases, diabetes consumed great health care resources in Hebei. Majority of direct medical expenditures were spent on treating diabetes-related diseases. Perhaps to reduce risks of diabetes complications by promoting early diagnosis, early treatment, rational drug utilization and disease control is the way to save health care and social resources.

PDB19

ECONOMIC IMPLICATIONS OF CHRONIC RENAL DISEASE WITH AND WITHOUT CO-MORBID DIABETES IN CHINA, POST-2005

Kataria A[1], Ahuja A[2], Taneja A[1], Chanan N[1], Mangat GS[1]

[1]*HERON™Commercialization, PAREXEL Consulting, PAREXEL International, Chandigarh, India,* [2]*HERON Health Pvt. Ltd., Chandigarh, India*

**OBJECTIVES:** To collate published evidence evaluating economic implications of chronic renal disease (CRD) with and without co-morbid diabetes mellitus in China (post-2005). **METHODS:** A systematic search of electronic databases (Embase® and MEDLINE®) was conducted from January 2005 to March 2014 to identify economic studies in English evaluating CRD with and without co-morbid diabetes mellitus in China. **RESULTS:** Five studies (all cost of illness, CRD [n=3] and CRD with co-morbid diabetes [n=2]) of 134 citations retrieved, met pre-defined inclusion criteria. In 2012, total cost/patient for stage-3/4 CRD was Chinese Yuan (CYN) 34205 with 97.75% being direct cost, while for stage-5 CRD the corresponding values were CYN128231 and 82.3%, respectively (Wu 2013). In the study by Zhang and colleagues, patients undergoing haemodialysis (HD) incurred 16% higher costs relative to those undergoing peritoneal dialysis (PD) in 2010 (p=0.01). Further, patients with comorbid diabetes incurred higher total costs compared to their CRD alone counterparts (p=0.03) (Zhang 2012). Among patients with CRD in northwest China observed between March 2007 and February 2008, the first, second, and third year renal transplant (RT)/HD costs were CYN201674/CYN94136, CYN71746/CYN87765, and CYN66851/CYN86987, respectively indicating higher efficacy and lower costs of RT than HD from second year onwards (Xiaoming 2012). These findings were consistent with those reported in another study; in 2011 the direct cost of diabetes-associated renal failure with HD/PD was CYN72761.17/CYN470764.77 and RT was CYN218508.075 (Zheng 2012). Among diabetic patients with comorbid CRD, direct cost in 2007 was CYN1308.07 million, while corresponding cost projected in 2030 increased two-fold to CYN2351.60 million (Wang 2009). **CONCLUSIONS:** CRD consumes a large portion of health care expenditures (with direct medical cost being main cost driver) and is projected to exert heavy burden on health budget in future as well. Additionally, patients with comorbid diabetes incurred higher costs relative to their CRD alone counterparts.

PDB20

EXAMPLE OF ANALYSIS UTILIZING REAL WORLD DATA: MEDICAL COST REDUCTION BY ADVISING UNTREATED-DIABETES PATIENTS TO VISIT DOCTORS

Iwasaki K, Kogo N, Dei M

*Milliman Inc., Tokyo, Japan*

**OBJECTIVES:** We define patients who have not consulted doctors to treat their diabetes, while they have learned their blood-sugar levels are high through health check-up, as untreated-diabetes patients. Our research objective is to calculate using real world data how much lower the medical cost would be if the untreated-diabetes patients visit doctors in response to suggestions to do, which represents the cost reduction of cost-effectiveness analysis. **METHODS:** We used the data of Japan Medical Data Center (JMDC), which provides health insurance claims data with linked health check-up data of 1.7 million members from health insurance societies in Japan. **RESULTS:** It is estimated there are 71 untreated-diabetes patients in a virtual (yet supposed-to-be typical according to the JMDC data) health insurance society with 10,000 members. And 16% of them would visit doctors within 3 months, while remaining 84% would leave their conditions as they are for averagely 40 months knowing that their blood-sugar levels are high. It is necessary to advise untreated-diabetes patients to visit doctors for treatment. Such advices should be able to start their diabetes treatment in early stages and prevent them from future complicating diseases. According to our calculation, the medical cost after its diagnosis would increase by 1.1% without aging factors by leaving their untreated-diabetes conditions for one month. **CONCLUSIONS:** If the virtual health insurance society had all the existing 71 untreated-diabetes patients visit doctors right now, their monthly medical cost would be 0.37 million yen lower against the amount they had to pay in the future (averagely in 20 months) if they continue to avoid visiting, which represents 37 yen a month per member, and all the patients with high blood-sugar levels visit doctors retrospectively, its monthly medical cost would have been 4.12 million yen lower now, which represents 412 yen a month per member.

PDB21

CLINICAL EFFICACY AND COSTS OF INSULIN ANALOGUE COMPARED TO HUMAN INSULIN IN PATIENTS WITH DIABETES: RESULTS FROM A TERTIARY HOSPITAL IN BEIJING

Guan X[1], Xu Z[1], Hu C[2], Wu J[3]

[1]*The 306th Hospital of PLA, Beijing, China,* [2]*Peking University Health Science Centre, Beijing, China,* [3]*Pharmacoeconomics Committee of Chinese Pharmaceutical Association, Beijing, China*

**OBJECTIVES:** This study aims to compare clinical efficacy and costs between insulin analogue and human insulin in treatment of patients with diabetes in a tertiary hospital in Beijing. **METHODS:** Data were extracted from inpatient electronic patient records in HIS system in a tertiary hospital in Beijing during the period between Aug 2011 and Nov 2013. Inclusion criteria: main admitting diagnoses were type I diabetes or type II diabetes; insulin analogue or human insulin were used during hospital stay. Exclusion criteria: combination use of insulin analogue and human insulin. Fasting blood-glucose (FPG) before breakfast was used as efficacy index while total inpatient expenditure was used as cost index. Unfortunately, HbA1c level was unavailable to this study. Student-t test and Chi-square test were conducted using SPSS 20.0. **RESULTS:** Insulin analogue (n=50) and human insulin (n=49) cohort had comparable male (68% vs 49%, P=0.055), age (50 vs 57, P=0.008), and baseline clinical characteristics (length of stay 10 vs 11, P=0.133; baseline FPG 8.73mmol/L vs 8.44mmol/L, P=0.630). At the point of discharge, FPG before breakfast was dropped to 6.39mmol/L vs 7.13mmol/L (P=0.025) in insulin analogue and human insulin cohort, respectively. The total medical costs were CNY 11,305 vs CNY 10,693 (P=0.577), and total drug costs were CNY 5,198 vs CNY 4,199 (P=0.186), in insulin analogue and human insulin cohort, respectively. **CONCLUSIONS:** Insulin analogue treated patients experienced significantly greater reductions in FPG before breakfast compared to human insulin treated patients, while total inpatient expenditure and drug costs showed no significant difference between the two cohorts. Should data permits, HbA1c data should be included in further analysis in the future.

PDB22

PHARMACOECONOMICS EVALUATION OF CLINICAL PHARMACY SERVICE FOR DIABETIC INPATIENTS

Long E[1], HU M[2], Tong R[1], Liu J[3]

[1]*Sichuan Provincial People's Hospital, Chengdu, China,* [2]*Sichuan University, Chengdu, China,* [3]*West China Hospital, Sichuan University, Chengdu, China*

**OBJECTIVES:** To evaluate the cost, cost-effectiveness and cost-benefit of clinical pharmacy service for diabetic patients on view of hospital. **METHODS:** A prospective study was conducted at a provincial hospital in Sichuan, China. Inpatients with a diagnosis of diabetes were enrolled in the study during 2010.03 -2011.06. Patients were divided into intervention group(121) and control group(122) randomly when admitted. Intervention group equipped a clinical pharmacist providing clinical pharmacy services during therapy, the control group took routinely pharmacy service. The times of avoiding medicine errors were counted as effectiveness, the saving of patients' expense was calculated as benefit. The cost was calculated by routine/clinical pharmacy service spending. Cost-effectiveness and cost-benefit analysis were conducted. **RESULTS:** The average length of stay was 13.82 days in intervention group and 14.79 days in control group(P>0.05). Average 337 minutes(5.6 hours) was spent in daily clinical pharmacy services in intervention group. The cost of routine pharmacy service in control group was 729.05$(daily salary* average stay length of patients), while clinical pharmacy services cost in intervention group was estimated as 1175.82$(routine pharmacy service cost+ training cost+ clinical pharmacy services cost), 446.77$ more than routine(theoretically, didn't actually happen). The average percentage of avoiding medicine errors was 64.19% in intervention groups and 3.54% in control group(total suggestion times for adjusting drug schemes /total medical orders), accordingly the cost-effectiveness of avoiding medicines errors(C/E) in intervention group was 18.32 while 209.95 in control group. The average admission expense was 1703.80$ in intervention group and 1959.50$ in control group(P<0.05), so average saving expense of patients under clinical pharmacy intervention was 255.69$. Comparing with the extra possible input of providing clinical pharmacy service, the net benefit was -191.08$. **CONCLUSIONS:** Clinical pharmacy service do play a significant role in avoiding medicine errors and reducing patient expenses, if didn't consider the time and labor cost of clinical pharmacist.

PDB23

EVALUATING THE LONG-TERM COST-EFFECTIVENESS OF LIRAGLUTIDE 1.2 MG AND EXENATIDE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

Shi LW[1], Han S[2], LIU F[3]

[1]*International Research Center of Medicinal Administration, Peking University, Beijing, China,* [2]*Peking University, Beijing, China,* [3]*Novo Nordisk (China) Pharmaceuticals Co., Ltd., Beijing, China*

**OBJECTIVES:** To evaluate the long-term economic and health outcomes associated with once daily liraglutide 1.2 mg, the most frequently prescribed dosage in China, versus twice daily exenatide 10 μg prescribed according to National Institute for Health and Clinical Excellence recommendations in clinical practice in patients with Type 2 Diabetes Mellitus (T2DM). **METHODS:** A published and validated computer simulation model (CORE Diabetes Model) was used to make the projection of 30-year long-term economic and health outcomes. Simulated cohorts and treatment effects were derived from results of a retrospective chart audit with a median follow-up of 48 weeks including 256 patients receiving liraglutide and 148 receiving exenatide. Treatment costs were derived from drug retail prices in Chinese market. The diabetes management and complication costs were obtained from Chinese published data. Projections were made from a societal perspective with an annual discounting rate of 3%. One-way sensitivity analyses were performed. **RESULTS:** Long term projections demonstrated that compared with exenatide, liraglutide 1.2 mg was associated with lower cumulative incidences of diabetes complications and improved